

BLUEPRINT

CALIFORNIA ENERGY COMMISSION
EFFICIENCY DIVISION

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2019 ENERGY CODE ADOPTED!

The California Energy Commission (Energy Commission) adopted the *2019 Building Energy Efficiency Standards* (Energy Code).

The 2019 Energy Code goes into effect January 1, 2020. Homes built under this Code will use about 53 percent less energy than those under the 2016 Code. Nonresidential buildings are estimated to use about 30 percent less.

Low-Rise Residential Highlights

PV Systems - For the first time, photovoltaic (PV) systems will be required prescriptively for newly constructed low-rise residential buildings, per **Section 150.1(c)14**. There are several exceptions which may allow a reduction in the size of the PV system required.

Quality Insulation Installation - Quality insulation installation becomes a prescriptive requirement in **Section 150.1(c)1E**.

All Electric Homes - A prescriptive pathway for an all electric home is introduced in **Section 150.1**.

Nonresidential, High-Rise Residential, and Hotel/Motel Highlights

Hospitals - For the first time, Occupancy Group I - Institutional (excluding I-3 and I-4) will have to meet the Energy Code for newly constructed buildings. The inclusion of Occupancy Group I is introduced in **Section 100.0(a)**. Additions and alterations to Occupancy Group I buildings do not have to comply.

MERV 13 Air Filters - New mandatory ventilation requirements are introduced in **Section 120.1**. Specified mechanical systems will be required to have minimum efficiency reporting value (MERV) 13 air filters. Air class and recirculation limits introduced based on occupancy categories.

LEDs - Lighting power density will be based on the energy consumption of LEDs instead of linear fluorescent lamps. This change to **Section 140.6** results in largest energy savings in the 2019 Energy Code.

The **2019 Energy Code** is available for review. More information on the 2019 Energy Code is available in the **frequently asked questions**, infographics for **residential** and **nonresidential** buildings, and **news release**.

MODELING ADUs

The Energy Commission recently updated its software, CBECC-Res, to make it easier to model accessory dwelling units (ADUs). CBECC-Res 2016.3.1 allows users to model wall extensions using the prescriptive exception. Existing wood-framed walls can be modeled without a penalty for not having continuous insulation as long as the siding is not removed. This new version also allows detached additions that do not have a connecting surface to be modeled.

Would you like more information on modeling ADUs? Several resources are available:

- **Frequently Asked Questions About CBECC-Res**
- Energy Code Ace's
 - Code and Coffee with Brian - Residential Modeling: Accessory Dwelling Units (ADU), **Part 1: Newly Conditioned Detached ADU**
 - Code and Coffee with Brian - Residential Modeling: Accessory Dwelling Units (ADU), **Part 2: Newly Conditioned Detached ADU**
 - Decoding ADUs: **Let's Talk Recent Changes**



ACCEPTANCE TESTING

For the 2016 Energy Standards



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When is acceptance testing required?

- Acceptance testing is mandatory for certain nonresidential lighting, mechanical, fenestration, covered processes, and controls.
- Acceptance testing applies when regulated systems or controls are installed in newly constructed buildings, additions, and alterations.
- Any acceptance testing that is required will be specified on the NRCC(s).

Who can conduct acceptance testing?

- Only a lighting Acceptance Test Technician (ATT) certified by an ATT Certification Provider (ATTCP) may perform testing for indoor and outdoor lighting systems and controls.
- The builder, contractor, engineer, or commissioning agent may perform testing for HVAC, fenestration, covered processes, and controls.
- A mechanical ATT certified by an ATTCP will be required to perform testing for HVAC systems and controls when the industry thresholds in § 10-103.2 are met.

How do I find an ATT?

- ATTCPs approved by the Energy Commission maintain a directory of certified ATTs on their respective websites (provided on back of this card).
- Search filters, like name and county, are available to make finding an ATT in your area easier.

CERTIFIED MECHANICAL ATTs

The Energy Commission has approved four organizations to train and certify mechanical acceptance test technicians for the 2016 Energy Code. These organizations are:

- **California State Pipe Trades Council (CSPTC)**
- **National Energy Management Institute Committee (NEMIC)**
- **National Environmental Balancing Bureau (NEBB)**
- **Refrigeration Service Engineers Society (RSES)**

At this time, mechanical acceptance testing is not required to be performed by a certified acceptance test technician. Testing by a certified technician will be required when the Energy Commission has confirmed that at least 300 technicians have been certified and are available throughout California.

For more information, visit the **Acceptance Test Technician Certification Provider Program** web page.

Q&A

ADUs

I am converting a garage to an ADU. The walls of the garage are being extended to increase the floor area. What are the insulation requirements for the extended walls?

These walls are treated as wall extensions. Wall extensions can meet the insulation requirements based on the existing dimensions of the walls being extended. This is as described in Sections **150.2(a)1Ai** and **150.2(a)1Bi**, and requires R-15 in 2x4 framing and R-19 in 2x6 framing.

For more on what is considered a wall extension, see **Blueprint Issue 118**.

I am converting a detached garage into a pool house. This is not an ADU. Is this considered a newly constructed building or an addition?

This is an addition. This follows the same requirements for detached garages converted to ADUs as described in **Blueprint Issue 122**.

NATIVE AMERICAN RESERVATIONS

Are buildings on Native American reservations required to meet the Energy Code?

No. Like buildings on federal land, buildings on Native American reservations are not required to meet the Energy Code.

GAS LIGHTING

Is gas lighting regulated by the Energy Code?

No. Gas lighting, whether for residential or nonresidential buildings, is not regulated by the Energy Code.

BUILT-IN WATER HEATER ISOLATION VALVES

I'm installing an instantaneous water heater that has built-in isolation valves and service ports. These valves and ports allow for the water heater to be flushed as part of regular maintenance. Am I required to install isolation valves as described in Section 110.3(c)?

No. The built-in isolation valves and ports meet the intent of the Energy Code.

FOR MORE INFORMATION

Home Energy Rating System:

<http://www.energy.ca.gov/HERS/>

Acceptance Test Technician Certification Provider Program:

<http://www.energy.ca.gov/title24/attcp/>

Approved Compliance Software:

http://www.energy.ca.gov/title24/2016standards/2016_computer_prog_list.html

The California Energy Commission welcomes your feedback on Blueprint. Please contact Andrea Bailey at: Title24@energy.ca.gov

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Need Help? Energy Standards Hotline

(800) 772-3300 (toll-free in CA)
Title24@energy.ca.gov

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2016 ENERGY CODE



Title 24 Part 6

Essentials



Nonresidential Standards

Plans Examiners & Building Inspectors

Plans Examiners and Building Inspectors – We Heard You!

Energy Code Ace is pleased to announce the launch of our **New & Improved** course

Now more focused on what we heard you say you need in a training:

- More doing, **less talking**
- More how-tos, **less content heavy**
- More strategic, **less overwhelming**

This new & improved course will help you:

- **Use Your Limited Time Strategically:**
 - Identify “essential” Plans Examiner and Building Inspector review tasks associated with top energy savings, and describe how review strategy shifts based on project type (Performance vs Prescriptive; New vs Additions and Alterations).
- **Understand What’s Crucial:**
 - Identify nonresidential construction’s “top seven” areas of typical greatest impact on energy savings.
- **Leverage Available Resources:**
 - Use given Plans Examiner and Building Inspector Checklists to guide review, and identify where checklist line items correspond to compliance documentation, Plan Set drawings and observed on-site conditions.
- **Develop a Flexible Review Strategy:**
 - Use Plans Examiner and Building Inspector Checklists and task prioritization strategies to perform a plan check or building inspection that is appropriate given your available time, realities on the job and goals of Title 24, Part 6.
- **Focus on Communication:**
 - Practice ways to address non-compliance, as well as methods for communicating effectively, during plan check and building inspection phases.

Register today for one of our upcoming classes!

The California
Statewide Codes
& Standards Program

Here to help you
meet the requirements
of Title 24, Part 6
and Title 20

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improve compliance
with the state’s
building and
appliance energy
codes and standards
and aimed at locking
in long-term
energy savings.



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DATE • TIME	LOCATION	INSTRUCTOR	REGISTRATION
Nonresidential Standards for Plans Examiners and Building Inspectors ★			
August 28 • 8:30 - 4:30	Glendale	Bruce Cheney	sce.com/energycenters
September 18 • 8:30 - 4:30	San Diego	Bruce Cheney	seminars.sdge.com
September 27 • 8:30 - 4:30	Tulare	Bruce Cheney	sce.com/energycenters
October 23 • 8:30 - 4:30	Santa Ana	Bruce Cheney	sce.com/energycenters
October 24 • 8:30 - 4:30	El Centro	Bruce Cheney	sce.com/energycenters
November 7 • 8:30 - 4:30	San Diego	Bruce Cheney	seminars.sdge.com

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